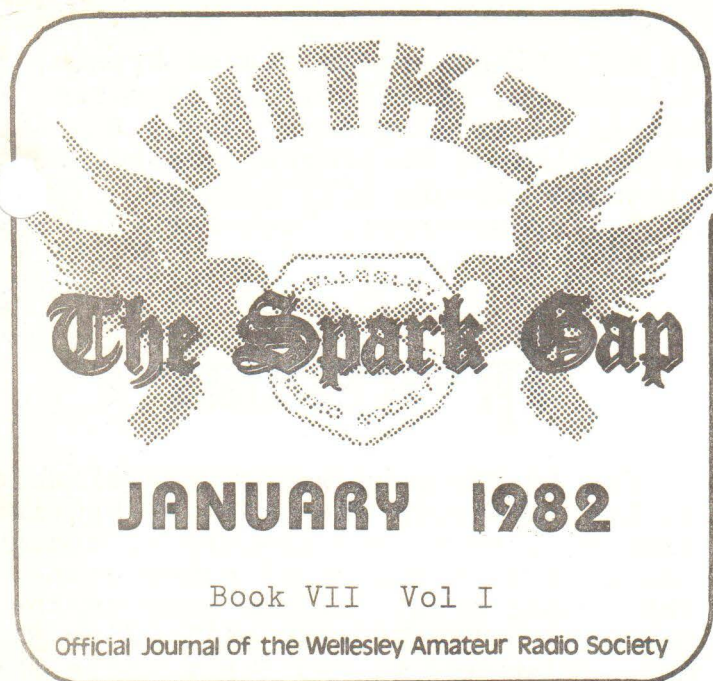




MESSAGE FAIR

by Nels Anderson, K1UR

The 1981 version of the Natick Mall Message Fair was run on December 10 through 13 and once again went very smoothly. The only hitch in the operation was the blizzard which arrived on the Sunday before when we were planning to set up the antennas on the roof of the mall. As detailed elsewhere in this issue, the storm was bad enough that we were called up by the Newton-Wellesley Hospital for assistance, so obviously antenna set up had to be delayed. The antennas did finally go up on Wednesday night, not exactly the ideal time for outside work during the winter but the best available under the circumstances. After a break at Beefsteak Charlie's to wait for the mall to close, we completed the inside setting up.

When Thursday night rolled around, we were all ready to go and although things seemed somewhat slower than past years everything went smoothly. On Friday night we were visited by a WCVB Channel 5 news team and were subsequently featured on their 11:00 pm news broadcast. This feature was run near the beginning of the newscast and showed most of our operators who were at the mall that evening. They

gave a good explanation of what we were doing and a good plug to encourage people to come down to the mall and send a message.

Saturday and Sunday things picked up as they usually do. Quite a few people mentioned that they had seen the Channel 5 feature on us which was nice. When things were all over at 6:00 pm Sunday evening, we had originated 650 messages to all parts of the U.S. and Canada, and through MARS to many parts of the world.

As in years past, the RTTY machine was one of the best attractions. With all the noise the old Model 15 makes, it's pretty hard to miss it even with all that goes on in the mall. About the only different display this year was a slide show of some of our other activities during the year. Since we have so many other good displays there was really no reason to add much this year.

So ends another years Natick Mall Message Fair. With take down started before the mall closed on Sunday we were out by 7:00 pm and on the way home after four tiring but rewarding days of showing our hobby to the world (or at least the shopping world).

Dave Kent, N2AWG, was in charge of organizing things this year and did a very fine job. He also made lists of things to do and things to bring so next years organizing job should be easier. This years operators at the mall were: K1OGF, K1UR, WB1BUM, N1ADY, K1TK, N2AWG, WA1PQY, WA1ZLQ, AF1M, WA1TBY, WA1DXT, W1HSS, WA2EHV, and N1ABZ. □

MEETINGS THIS MONTH:

January 7, 1981 at 7:30 pm

January 21, 1981 at 7:30 pm

Intermediate Bldg, Wellesley Hills, Mass.

ELECTRONICS EXCHANGE

For Sale: Spectronics Digital Display DD-1. A digital readout for your Yaesu 101 series, 401/560/570. No internal connections needed, just plug it in. Mint \$100. Heathkit frequency counter 1M1400. Professionally calibrated to ± 1 Hz. Mint \$65. Bob Woodbury, K1ZL/GFI 617-785-1423.

This column is open to all WARS members at no charge. Please send your ads to the editor (address on page 3). □

CROSSBANDER

The Crossbander, a publication for Eastern Massachusetts Radio Amateurs which many WARS members already receive, has a new editor in Phil Temples, K9HI. The format has also been changed and the frequency of publication increased to once a month. The first two issues in the new format are excellent and a subscription is highly recommended to all area Amateurs. The contents are of general interest to the entire Amateur population. Subscriptions are \$5.00 for 12 issues. Send payment to Rick Beebe, K1PAD, 6 Tracy Circle, Billerica, Mass. 01821. □

Recent talk about "KA1" callsign changes is only a rumor. A Federal Communications Commission spokesman told N1BLH that the change is not true. Speculation about the changes had followed rumors on Boston-area repeaters that the Commission was changing calls to eliminate conflict with U.S. Amateurs in the military who are stationed in Japan. Thanks N1BLH.

Crossbander, December 15, 1981

The FCC's Gettysburg, Pennsylvania licensing facility has a new telephone number. Call 717-337-1212, the Consumer Assistance Officer, for information on license processing and requests or questions about forms. Write to them

at FCC, Consumer Assistance Branch, Gettysburg, PA 17325. It is currently taking 40 working days (about two calendar months) to process Amateur Radio licenses. Thanks W5YI Report.

Crossbander, December 15, 1981 □

hr REPORT

The 10 MHz band won't be available to U.S. Amateurs when WARC 79 provisions go into effect January 1, though Amateurs in a number of other countries will greet the new year on the new band. The British will be on 30 meters January 1, and for a while the Home Office had agreed to give them limited privileges on 18 and 24 MHz as well. However, that agreement has now been rescinded.

hr Report, November 20, 1981

Repeater operators are still responsible for what goes on their machines, the Commissioners decided in dismissing a Petition for Rulemaking RM-3613, filed early in 1980 by WBOPI and WA6KOS, had asked the FCC to place full responsibilities for transmission content on the originator.

hr Report, December 4, 1981 □

OFFICERS

PRESIDENT:

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VICE PRESIDENT:

Dick Paret, WA1ZLQ, 762-5074

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FUND RAISING:

Kevin Kelly, WA1YHV, 242-0341

OPERATING ACTIVITIES:

David Kent, N2AWG, 756-5325

The Spark Gap

Official Journal of the Wellesley Amateur Radio Society



EDITOR-IN-CHIEF:

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THE "SPARK GAP" IS A MONTHLY PUBLICATION OF THE WELLESLEY AMATEUR RADIO SOCIETY. ITS PRIMARY PURPOSE IS TO KEEP ITS MEMBERS ABREAST OF CURRENT HAPPENINGS, F.C.C. RULES & REGULATIONS CHANGES, AND TO LIST EQUIPMENT OFFERED FOR SALE OR TRADE BY MEMBERS. MEMBERS ARE ENCOURAGED TO CONTRIBUTE TO THE "SPARK GAP" AND MAY SENT THEIR ARTICLES (TYPEWRITTEN IF POSSIBLE) TO THE EDITOR-IN-CHIEF OR TO THE CLUB ADDRESS.

THE WELLESLEY AMATEUR RADIO SOCIETY IS A NON-PROFIT ORGANIZATION DEDICATED TO THE PROMOTION OF AMATEUR RADIO THROUGH INSTRUCTION, FELLOWSHIP, DEMONSTRATION, AND ENCOURAGEMENT OF PARTICIPATION. ANNUAL MEMBERSHIP IN THE SOCIETY IS \$8. THE CLUB YEAR RUNS SEPTEMBER 1 TO AUGUST 31. AMATEUR NOVICE AND GENERAL CLASSES ARE CONDUCTED REGULARLY AT NO COST. TO ENROLL IN A CLASS, OR GAIN INFORMATION ABOUT THE SOCIETY IN GENERAL, WRITE:

THE WELLESLEY AMATEUR RADIO SOCIETY
324 WASHINGTON STREET
WELLESLEY HILLS, MASS. 02181



OFFICIAL BULLETIN

Number 143, dated November 24, 1981:

The Federal Communications Commission has adopted a report and order in Docket 80-252 which will permit facsimile and SSTV operation on additional frequencies essentially as proposed last year. See Happenings in August 1980 QST. The effective date is not yet known. The Commission also adopted a Notice of Proposed Rulemaking which provides for automatic control of beacons operating at very high frequencies. Details on these official actions to follow in QST.

Number 144, dated November 24, 1981:

ARRL Headquarters has received a report that a large number of Amateurs reporting for exams at Grand Rapids, Michigan were not given tests because of last minute FCC cancellation. We

believe the temporary shutdown of federal services because of the recent presidential veto of a stopgap appropriations bill caused this particular cancellation. However, because of recent budget cuts all Amateurs are encouraged to check with their local FCC District Office to determine the status of the FCC exam schedules before traveling to exam points. □

hr REPORT

The Lynn fire, which destroyed or damaged 26 buildings and left over 600 people homeless, found area Amateurs making a major communications contribution. The initial call for help came from the Red Cross, which needed radio links between relief shelters early Saturday morning. Salvation Army soon followed suit, and in the early afternoon the National Guard asked for Amateurs to provide supplementary communications between their command posts and roving anti-looting patrols.

Between 70 and 100 Amateurs from across eastern Massachusetts took part in the operation, which used 2 meters and lasted until late Sunday. The Amateur participation was observed by the governor and other state officials, and received a good deal of very favorable comment in news media.

hr Report, December 4, 1981

Amateur Radio's fate, insofar as the FCC is concerned, may rest with the forthcoming report of the Commission's "Program Evaluation Task Force." The task force, made up of FCC staff members, has been reviewing all commission activities to determine what programs could be cut back or eliminated. Such cutbacks would be alternatives to the 12 percent across-the-board cut that is presently planned. Either way, the Amateur community appears destined to lose out, particularly in exams and in enforcement. With FCC services certain to be cut, the provisions of Senator Goldwater's S-929 that would permit Amateurs to assist the FCC in exam administration and enforcement take on new importance.

hr Report, November 20, 1981 □

"Timeout!"

By Mike Adlerstein, K1FB

The sunspots are really beginning to fade. As everyone knows, we have already gone well past the time of peak sunspot activity in the 11 year cycle. We hit that peak in the 1979-1980 time frame. The next peak is in 1991. That's not to say that there is no DX left on the bands, but there is surely a lot less of it. For example, for all but a few morning hours here on the east coast, all bands above 40 meters are closed to Eastern Europe. They still open nicely to Japan in late afternoon and in the early afternoon to the South Pacific. The days when we could get on 10 meters and contact Australia during prime time (8 pm to 12 pm) are becoming more and more rare.

This would be a good time for frustrated DX'ers to start thinking about substitute activities. A new mode, RTTY, ATV, VHF, traffic nets...? As for 160 meters, there may still be some DX down there!



ACTIVITIES

by Nels Anderson, K1UR

Sunday, December 6 was scheduled to be the day to put up the antennas for the Natick Mall Message Fair, but instead the biggest snow storm since the blizzard of 1978 forced quite a different activity. At around 7:00 am Dick Paret, WA1ZLQ, was notified by the Newton-Wellesley Hospital that our aid would be needed in providing communications for what is effectively a radio-dispatched taxi service to get snow-bound nurses back and forth to the hospital. This is the same activity that got our relations with the Newton-Wellesley Hospital started during the blizzard of 1978.

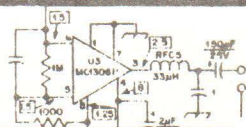
In 1978 several club members owned four wheel drive vehicles which allowed them to do the driving as well as the communications. For the most part this was not the case this time, al-

though several club members did drive themselves. Instead, the aid of the Wellesley Red Cross was enlisted as well as other volunteers and thus enough vehicles were found that could travel the snow covered streets.

The operation was run twice, once just after noon and again after 9:00 pm to correspond with the hospital's shift changes. For each shift, cars were on the roads for several hours and before we were all through and home for the evening it was nearly 2:00 am. Over 100 nurses were transported during the two shifts, allowing the hospital to continue with as normal operation as possible.

Once again Amateur Radio proved its usefulness in times of emergency. All operators, drivers, and other volunteers are to be commended for giving up their time and venturing out into the nearly two feet of snow. Dick Paret, WA1ZLQ, is especially to be commended for organizing this emergency operation quickly.

Tek Tok



by Nels Anderson, K1UR

It would appear that the microprocessor revolution has just about hit the ultimate in both price and simplicity with the introduction of the Sinclair ZX-81 a few months ago. It is available complete with everything you need except for a TV set for \$149.95 or even better, as a kit for \$99.95. The kit is very simple, requiring only a soldering iron and cutters to assemble, and any ham should be able to put it together in a few hours. Some of the early sets of instructions have minor errors on them which will prevent the computer from working, but these are easily corrected.

Several WARS members already own the ZX-81 and have been impressed by the power of the BASIC language used. As it comes, there is only 1k (1024 bytes) of memory for programs which is rather limited but for an additional \$99.95 this can be expanded to 16k which will allow very extensive pro-

grams. It is also possible to double the original 1k to 2k by changing the memory chip right on the original printed circuit board. The chip to do this should be available for relatively little. In a month or so Sinclair will also be introducing a printer for under \$100.00.

Now the question I heard asked when this unit was being shown around at a club meeting recently was what use is it for me as a ham? Well, the first obvious use is as a very inexpensive way to learn some computer basics which, as we all know, is becoming more and more important. But you say you want to really use it around the shack. One idea I have for mine is to plot band conditions during the VHF contests that the club operates. I have been doing this by hand in the past, recording number of contacts during each hour of the day for each band. With the computer, I could enter the information after each contest, and get the results for that one contest and an average for all past contests. The more contests operated, the more representative the results would be for our specific location and the more useful for planning our operating times. The ZX-81 has some very nice plotting features so a neat bar chart could be made to show the information. This same kind of thing could also be done by the DX'er to learn band conditions to various parts of the world from his specific QTH.

The computer could also be used as a dupe sheet during contests, which would be very handy now that the new FCC call system has made paper dupe sheets almost impossible to use. More complex logging operations could also be incorporated of course.

A more sophisticated application would be satellite tracking. The current OSCAR satellites are in low orbits which means that they pass overhead in a short period of time requiring constant movement of the ground station's antenna. The computer could be programmed to tell the operator when the antenna needs to be moved, both in azimuth and in elevation which is otherwise quite tricky to keep track of when you are also sending CW and trying to follow the Doppler

shift. Even better, with a little modification, the computer could be made to turn the antennas by itself. This is certainly not trivially simple but would make a good project for the technically oriented ham.

Along the same lines as the OSCAR tracker would be a RTTY interface which would again require a hardware modification. With all the ads in the magazines for this type of interface for the other home computers it's probably just a matter of time before there is one for the ZX-81, but in the meantime this would be another good project for the technically oriented ham.

Certainly computers like the ZX-81 are not for every ham, but they do have their uses around the shack and surely we'll see more of this type of thing in the near future. Many hams already have microprocessors in their shacks whether they know it or not as many of the new rigs have them built in to control the frequency. Since this is the wave of the future there's no doubt that hams will be riding this wave as they always have in the past.□

CHUCKLE KORN-LR

by Pete Bradley, N1ADX

I have been rather busy lately with a thorny antenna problem. Some new people moved in recently a few houses away, and in the first week a dipole appeared behind the house. It was slung high in the trees in such a way that I can just see the feed point and transmission line as I leave my driveway in the mornings. Before I had a chance to talk to any of the people there, I noticed that the feedpoint on the antenna was in a different position from before. In fact, it was different almost each day. By estimating the distances of the feed from each end of the antenna, and by listening for a loud nearby station, I tried to work out how the antenna was able to radiate a signal on several of the ham bands. It would appear that the antenna is of a very flexible design with one "leg" measured to resonate on the desired frequency while

the other might be grounded. Or perhaps the resonant part naturally takes the signal because the impedance is low, while the impedance is too high in the non-resonant part. I have several quite reputable engineers working on the problem, as is a rather large computer at a certain nearby college. So I was amazed yesterday as I walked up to the house to ask the owner about the wonderful all-band antenna, and found a large hairy dog attached to the end of the down-lead. I understand that it is called a dog trolley or dog walker. The animal's leash is looped over its overhead rope so he can move around the yard. I hope that none of my ham friends find out about this. □

hr REPORT

Polish Amateurs are off the air as a result of the restrictions resulting from the imposition of martial law there early this week. Part of the clampdown that's resulted from the widespread unrest in Poland has been an almost complete cutoff of all communications, and late word is that the confiscation of all Amateur Radio transmitters has been ordered.

hr Report, December 18, 1981

"Amateur Radio--An American Phenomenon" was the title of the doctoral thesis that earned KH6CZ his Ph.D. earlier this year. KH6CZ, Fred Elsner, is a retired army colonel whose work on Amateur Radio in the University of Hawaii's American Studies Program is believed to be the first doctoral paper on that subject since 1934. Thanks Spark Gap Times.

hr Report, December 18, 1981

The new Russian RS satellites should be up and orbiting by now, as the latest word from Europe was that they'd be launching some time around December 16th. Though nothing has been heard at press time, watch for the main beacons on 29.4, 29.45 and 29.5

hr Report, December 18, 1981 □

OLDE TIME RADIO

by Robert R. McKay, N8ADA

--Dayton R.F. Carrier, via ARNS

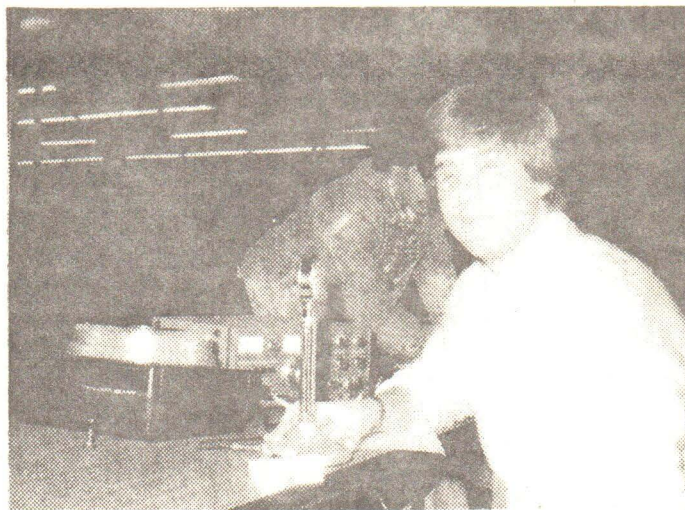
Oddly enough my first recollection of radio was not the magic sounds that came from the giant horn of that early Atwater-Kent, but the pungent odors that filled the living room when it arrived. The various bakelites, varnishes and other insulation combined to give off a distinctive room aroma that fast became a part of the American home. Somehow, Amos and Andy, Fibber McGee and Molly, Jack Benny and others were instinctively identified with the aroma we all got to know as radio. Those of us who discovered "short waves" also identified the odor with exotic places around the world, strange music and unfamiliar languages. You didn't have to be told when you entered a store that sold radios, your nose told you. Radio Rows (Hudson and Cortland Streets in New York and Madison Street in Chicago) were literally "heaven" for radio buffs. The aromas in these stores could be detected a considerable distance away. Ham shacks were the same. The attics, basements or back bedrooms that housed these wonderful black boxes all gave off that distinctive smell that was just like a Pied Piper to many of us. There wasn't a perfume on the counter of attraction for most of us that the bakelite aroma had.

Well, over the years we have had a whole series of marvelous improvements and technology has really expanded. However, while the gains have been impressive, we have had some losses. Have you ever stuck your nose in one of the new rigs? Well, they work just fine, but can't somebody invent a little vial of radio smell that we can uncork and place in these sterile gadgets so that once again radios will smell like radios should?

NATICK MALL PHOTO GALLERY



Bill Hanlon, N1ADY, sending some messages out on 2 meters.

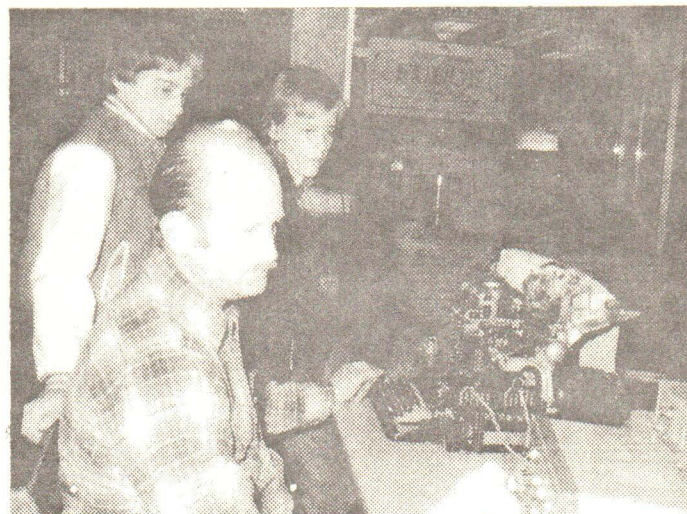


Chad Johnson, N1ABZ, at the 80 meter station.

FCC ISSUES

How the ARRL might support FCC activities was the principal topic discussed when representatives of the League spent December 18 visiting the Commission. ARRL President Harry Dannels led the group, which included Washington liaison Perry Williams and legal counsel Chris Imlay. With severe budget cuts threatening drastic cut-backs in many areas where FCC involvement is vital to the well-being of Amateur Radio, the prime purpose of the League visit was to explore ways in which Amateurs in general and the ARRL in particular can supplement or even replace some present FCC supported operations.

Amateur examinations and enforcement were the two prime areas covered in the Thursday discussions, which involved several of the Commissioners and their staffs as well as key Commission staff members. In a parallel effort, 73 publisher Wayne Green has also been talking to some of the Commissioners and is said to have suggested organizing Amateur training, examinations, and licensing through local high schools.



Erik Thoresen, K10GF, demonstrates RTTY to some shoppers.

Just where these efforts might lead seems to depend, at least at this time on the fate of Senator Goldwater's bill S-929. If it gets through the House in its present form, the door will be open for greatly expanded Amateur involvement in both licensing and enforcement. Both are areas that are expensive to the Commission but critical to Amateur Radio's future welfare.

hr Report, December 18, 1981□

The Spark Gap



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